

HARNESSING THE UNIVERSAL COSMIC ENERGY

Many aspects of the radiant energy receiver are still a mystery, and the exact nature of the energy that Moray was tapping remains elusive.

Part 2 of 2

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THEORY, CONSTRUCTION AND OPERATION OF MORAY'S DEVICE

The exact nature of the energy captured by Moray's radiant energy receiver remains a mystery. Initially Moray thought he was tapping into the planet's electrostatic gradient, as his initial investigations were similar to Franklin's famous experiments with lightning. Next, due to his apparatus somewhat resembling a radio receiver, he thought perhaps he was tapping into natural electromagnetic radiation. In the end, however, he came to the conclusion that the energy was some form of cosmic radiation. Whatever it was, it came in intense bursts—impulses only several microseconds long.

Moray was very ambiguous in his technical descriptions regarding the energy receiver, mainly because of his unfortunate experiences with individuals trying to steal his invention, so it is very difficult to ascertain exactly the type of energy that entered the Moray receiver. The cosmic energy appeared to take many forms as it travelled from its source to the receiver itself; thus, when Moray spoke of the nature of this energy, he may have been referring to its original nature, not the actual energy received by the device. As he used standard capacitors and coils to form the tuning part of the apparatus, the energy that entered the device must have been electromagnetic and at radio frequencies.

However, Moray stated that the energy received was much greater in frequency and that part of the process within the later device was to step down the frequency. But again, it is difficult to tell what is the truth and what are simply red herrings. Moray would surround his device with coils and other pieces of equipment so as to confuse an onlooker. It is not known to what degree he may have used similar tactics in his technical descriptions.

All that is known for sure is that the radiant energy device worked and supplied a substantial amount of high-frequency, high-voltage electrical current when connected to an aerial and earth. Whenever the aerial or earth connection was removed, the current at the output would cease. Also, when either the aerial or earth connection was brought close to the corresponding terminal on the device, a fat white spark would jump the gap; this also suggests the presence of high-frequency electricity.

It was several years before Moray was able to develop his simple crystal set further, but in the mid-1920s he developed the technology to a point where it could deliver up to 50,000 watts of power. The new device contained a whole new system, with the original Swedish Stone circuit at the very front end. This new receiver was able to power a bank of 40 lamps, which all shone brightly when connected to the receiver. The light emitted from them was very strange, very bright but not harsh to the eyes, yet it would produce unusual effects when photographed. This sort of light is often referred to as *cold light*, and it is associated with the operation of zero-point energy devices. Tesla was perhaps the first to generate this unusual phenomenon.

The electrical current delivered by the Moray device had a potential of 250,000 volts and a magnitude of 200 mA at full load. When electrical loads such as the flat iron were connected, Moray would often use a specially designed transformer to step down this massive potential.

This transformer was of peculiar design and was wound with wire that appeared too thin to carry these relatively large currents.

One individual whom Moray allowed to study the radiant energy receiver in quite some technical detail was T. J. Yates, who wrote the following statement:

This is to certify that on the evening of March 16, 1929, in connection with Dr Wilkinson of Cedar City, I witnessed a demonstration at the laboratory of T. H. Moray, Salt Lake City, Utah.

Dr Moray claims to have devised and invented an apparatus that will produce electrical energy without the use of a prime mover, and this is the apparatus demonstrated on this occasion above referred to.

The apparatus consisted of an antenna, specially balanced, or aerial capacitor and a special ground wire. These were connected to the terminals of a switch. Two wooden boxes were placed on a table. On one of these boxes was a high-frequency transformer and in the other box were two sets of condensers, ten large condensers in one set and ten small condensers in the other set; two composition cylinders, each about 1-1/8 inches in diameter and four inches long, each of these weighing about three or four ounces; and another box, approximately hemispherical in shape, about two inches in diameter and weighing about two ounces; and coils of wires and other equipment.

These pieces of apparatus were connected by a number of wires, by which the hook-up was connected. Two of these wires were led out to the switch. One was attached to the blade of the switch and the other to the jaw of the switch, so that when the switch was open the antenna, lead-in, apparatus in the boxes and the ground wire were all in series. The other wires leading out of the box were connected to six 100-watt lamps connected in multiple during part of the demonstration, and to a flat iron during part of the demonstration.

During the demonstration the apparatus was connected in series as above described, except that a small switch connected in series with the coil was left open.

Dr Moray energized and synchronized the device, and in three or four minutes the lamps were lighted and remained bright as long as the circuit was left closed, which was about sixty minutes. He then connected an electric flat iron. In a short time the iron was hot. When the ground wire was disconnected and then the lead-in was disconnected, the lights went out.

Before and after the demonstration I closed the big switch which connects or shorts the antenna and ground and made other tests. If the antenna or lead-in wire were connected to the lighting circuit, this would have produced a short circuit. I further tested by closing and opening the switch several times to see if any sparks appeared, but there were no sparks. I placed my wet finger between the blade and the jaws of the switch and could not feel any electricity. I touched my hand to both sides of the switch and the wall to check for ground but could not feel anything. With the apparatus all connected as when operating the lights, the contacts with the switch were moved but produced no arcing. This indicates that the circuit was dead.

While the demonstration was being conducted and the lamps were receiving the energy through the apparatus, the main switch that controls the lights in the building was opened. All the lights on the house circuit went out but the lights on the radiant energy circuit were not altered—were neither brighter nor dimmer at the time. Thus the lights could not have received their power from that source.

The condensers were thoroughly tested. The terminals were shorted, the positive to the negative. If they had been batteries they would have showed a spark, but no sign of a spark appeared. They were then tested by connecting them to the electric terminals. After thus being charged the large condensers gave a vigorous discharge, showing a brilliant strong arc and a loud snappy sound, showing a sudden discharge as condensers are supposed to do and batteries never do. The small condensers were less vigorous in discharging but had the same snappy discharge of a condenser—not how a battery discharges. These tests proved positively that condensers and not batteries were in the cases supposed by some to contain batteries. Besides, no batteries of such size could produce

such power. The boxes were completely emptied, thus leaving no possible place for batteries to be stored. Besides, the boxes were not large enough to hide batteries in.

During the time that the lights were burning, the connections with the big switch were moved along the switch and a vigorous arcing occurred, thus proving that electrical energy was passing through this apparatus.

The electric lamps were receiving energy from some source, and during the demonstration, which lasted for more than an hour, the lights were brilliant at all times, just as bright at the last as at the first demonstration.

The lights on the demonstration were a different color and brighter and whiter than those on the house circuit.

One is therefore forced to the conclusion that the electrical energy was received from the other source and, difficult as it is to understand with our present generation's knowledge, no other conclusion can be drawn from the demonstration as above described than that the energy was received by and through the apparatus as claimed by Dr Moray.

This testimony gives some insight into the construction of the receiver, how it was often set up and how well it performed. There are no diagrams or detailed descriptions of exactly how the device was put together. The only sources of information are the writings of Moray himself, written at a time when he still wanted to keep the inner workings of his invention secret. However, it is still possible to glean some information on how a few of the inner components operated.

Moray's new, more powerful, device used a range of different 'tubes' to store, release and control the general flow of radiant energy. As has been mentioned before, the device was able to

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step down the frequency of the oscillations so that normal loads could be powered. For instance, Moray often disconnected the bank of lamps and connected a flat iron, which heated up as normal. Such a load would not be able to use the high-frequency currents initially generated by the receiver. The principle behind stepping down the frequency involved sub-harmonic octaves, but exactly how this worked is unknown.

Much the same can be said for many of the internal components of the receiver as a whole. The only components that were given any detailed description are the ionic oscillators, which stored the incoming energy through a process of resonance. These devices operated on the principle of ion interaction of gases resulting in oscillation. Each consisted of a thin wire running up the middle of a cylinder fabricated from some catalyst; the whole construction was then mounted inside a glass tube filled with low-pressure gas.

When the high-frequency voltage reached the central conductor (the thin wire), coronal discharge formed around it—an indication that the low-pressure gas molecules were becoming negatively ionised and accelerated away towards the cylindrical catalyst. Meanwhile, there were positive ions being formed and accelerated away from the catalyst towards the central conductor. The negative gas ions and the positive catalyst ions eventually met and chemically interacted for a short period of time. However, some of the negative gas ions outside the free mean path reached the catalyst cylinder and became neutralised. These neutralised gas molecules made their way back to the coronal discharge around the central conductor, and then they would again become ionised and repeat the process. This action formed an oscillator as the molecules flowed back and forth between the central conductor and the cylindrical catalyst.

There was also a second mode of oscillation formed by the interaction of negative and positive ions. When these two interacted, they formed a vibrating dipole for a short period of time, much like two masses held together by a spring. These interactions emitted high-frequency electromagnetic waves.

Moray's construction also created a high faradic capacity through the large charge potential formed across the device. These ionic oscillations were set up so as to be synchronised with the frequency of the incoming currents or vibrations of the universe. In general, though, the oscillators tended to be somewhat unstable, so it was left to the tuned LC circuits to give the system frequency stability.

Moray stated that the general laws of electricity, such as Ohm's law, do not apply in ionised gases, and so other rules come into play. In the process of resonance, short impulses of oscillation build up in the resonator, forming a powerful oscillation. Eventually the oscillation becomes so intense that the resonator self-destructs. A wine glass subjected to intense sonic pulses will slowly resonate up until it rings and finally cracks.

The same effect occurred in Moray's ionic oscillators. The short impulses of radiant energy would be gradually stored in the ionised gas. Eventually the gas molecules would take on a pure harmonic vibration until the oscillation became too intense. Then

the ionised gas would become conductive and dump all of its stored energy into a condenser before discharging into a coil. The coil in turn, being part of a transformer, would then resonate up another ionic oscillator; this process continuing down the system, building up usable power ready to be delivered to the output load.

Still, of all the components that made up Moray's energy receiver, the crystal remains the greatest mystery.

MORAY AND THE TRANSISTOR

One of the greatest developments of modern electronic science is undoubtedly the invention of the transistor. However, the history of its invention and development is somewhat unclear, leaving a blurred chronology. The official line is that in 1956 William Shockley, John Bardeen and Walter Brattain received the Nobel Prize for the invention of the transistor in 1947–48.

The transistor is constructed as two rectifiers connected back to back. This construction is clearly represented in Moray's diagrams of the detector tube used in the radiant energy receiver: two pieces of Swedish Stone connected back to back, forming three connections.

One individual who was often in contact with Moray and who witnessed the radiant energy receiver on several occasions was Dr Harvey Fletcher. At the time, Fletcher was head of the Bell Laboratories department that would later develop the transistor. Could it be that it was in fact Moray who invented the transistor and not Shockley? It is certainly true that the modern semiconductor diode used for radio reception was originally developed from the crystal detector. So it is more than possible that the transistor had a similar origin, as a transistor is no more than two diodes connected back to back.

What makes Moray's transistor or detector tube different from these other crystal devices is that it could tap into cosmic energy as well as act as a basic electronic device.

However, Moray is not the only one to have invented a crystal transistor.

Robert Adams, the famous aether-technologist who invented the pulsed motor-generator, claims to have invented a similar device during the years 1929–33. While experimenting with a crystal set radio, Adams formed a contact between two detector crystals and, making a connection at this junction, thus formed a transistor many years before Shockley and his team did.

There are many others who can make similar claims. Curiously, these crystal detectors and transistors are superior to their modern semiconductor counterparts as they have higher gain, generate less electrical noise and in some cases can handle much higher power levels. What makes Moray's transistor or detector tube different from these other crystal devices is that it could tap into cosmic energy as well as act as a basic electronic device.

RADIOACTIVITY AND TRANSMUTATION

By the 1940s, Moray became interested in the works of Gustave LeBon and his theories of radioactivity. LeBon suggested that natural radioactive decay was due to heavy nuclei being bombarded by cosmic energy. This is quite contrary to the orthodox belief that radioactive decay is simply the product of the instability of certain nuclear masses.

Obviously this idea of radioactive decay by some sort of radiant energy was very much of interest to Moray, particularly as such

radioactive materials are capable of ionising low-pressure gases (the principle behind the Geiger counter). Gustave LeBon's theories were considered heresy by nuclear physicists then, as they are today, so it is interesting that when Moray tried to get hold of LeBon's book, *The Evolution of Matter*, he found it had been removed from all the public libraries. This was around the time of Project *Manhattan*—the development of the atomic bomb.

At this time, Moray had very little of the Swedish Stone left and so needed to find a replacement. In the end, he developed a new detector tube that used radioactive material. This detector did not need either an aerial or a ground connection, so the whole device was completely self-contained.

According to the free energy researcher Bruce Perreault, this new detector valve used a synthetic crystal that was composed of some kind of radioactive material (most probably polonium) and pure germanium. However, the greater part of the crystal was made from some detecting compound of a similar chemical composition to galena (lead sulphide), as used in traditional crystal set receivers. In its operation this single manufactured crystal, mounted in its glass tube, could produce several kilowatts of electrical power; it was literally a solid-state free energy device. Like a traditional thermionic valve, this new detector valve used particle streams to carry electrical currents within the glass tube. The difference is that in a traditional thermionic valve, a heated cathode generates the particle stream; but in Moray's device, the particles emitted during radioactive decay acted as an electrical carrier. Again we see similarities between Tesla's cosmic rays and the operation of Moray's radiant energy receiver.

Working on the basis of LeBon's theories, Moray found that the radiant energy is as much present in between the atoms of matter as it is in the depths of the cosmos. This means that the energy produced by this new radiant energy receiver did not originate from the depths of the cosmos but, instead, from within the energetic structure of the crystal.

This discovery led to a new avenue of research that can only be described as *alchemy*. Moray now saw matter as a mass of electrical vibration; and so, through electrical processes, he was literally able to transmute metals.

It is well known that alchemists sought the formula to transmute base metals such as lead into gold. Boaz Mine Laboratory analysed one ounce of lead subjected to Moray's process; it was found to contain 35 cents worth of gold (in 1956 terms)—real, tangible alchemy.

Another test was conducted by the Union Assay Office in Salt Lake City, this time on 50 cc of artesian water that showed no trace of gold before being processed. After Moray's treatment it was analysed again and found to contain \$10 worth of gold and \$3 worth of silver per ton rate (1956).

As well as conducting these more alchemical-type feats, Moray treated metals to give them unusual properties. The melting point of lead is usually around 327 degrees Celsius [620.6° Fahrenheit]; but after Moray treated the metal with the radiant energy process, this temperature rose to 2,000 degrees. Using similar processes, he managed to increase the radioactivity of carnotite, uranium and a special copper-lead alloy.

Now it seemed that radiant energy was not just an unlimited source of energy, but also the means to modify the very structure of matter. How exactly Moray applied this energy to transform matter remains a mystery. However, on the basis of similar research, it may have been done through the application of high-voltage, high-frequency electricity—the type of energy that was generated by the radiant energy device.

A NEW FORM OF ENERGY?

There is still some debate over the true nature of what Moray referred to as *radiant energy*. Moray himself did not perceive it as electromagnetic in nature, yet his energy receiver was most definitely based upon the principles of electromagnetics. His son, John Moray, stated in his biography of his father that the radiant energy was not the cosmic radiation identified by modern physics.

This means that Moray's radiant energy is neither high-energy charged particles nor electromagnetic radiation in the upper part of the light spectrum. So either a new energy form had been discovered, or Moray was simply clouding the issue for security reasons. If the former, then the secret is hidden within the Swedish Stone—a secret that may only be unlocked by studying similar

research, such as Townsend Brown's work in petrovoltatics. However, there have been some more orthodox suggestions for the nature of Moray's radiant energy.

E. E. Richards, an independent free energy researcher, has suggested that the energy is generated by the Earth's complex interaction with the interplanetary solar wind. This theory takes us back to the electromagnetic explanation behind the energy receiver, but with a slightly different slant. The Earth's magnetic field is constantly being bombarded by high-velocity particles (mainly ions and electrons) which distort its natural shape to form the

magnetosphere. The magnetosphere is a plasma sheet protecting the Earth and Moon from the Sun's intense radiation. Acoustic waves are often set up in this plasma sheet, and they generate vast amounts of electromagnetic energy. The electromagnetic energy is induced into the Earth and has a frequency range from about 100 Hz to 30 kHz, so it can be received with the simplest of electronic equipment.

During the First World War, German soldiers on the western front often electronically intercepted British trench telephone conversations. An audio valve amplifier connected to the ground via metal stakes was all that was needed. However, as well as hearing vital information regarding trench warfare, they also heard strange clicks and whistles. It was not until about 20 years later that it was realised that they had in fact been listening to the magnetosphere.

As well as the plasma sheet forming the magnetosphere, there is another electromagnetic entity found in our upper atmosphere: the Van Allen belts. These were discovered during the *Sputnik* and *Explorer* missions—the beginning of the Space Race. Onboard instruments noted a radiation null at specific points in the Earth's upper atmosphere; it was later discovered that the instruments were in fact overloaded by the intense radiation held within these energy belts.

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The Van Allen belts are formed by high-velocity solar particles becoming trapped in the magnetic lines of force around the planet. These particles spiral from the North Pole to the South Pole and back again several times a second. They are called *belts* because the entire structure is in the form of a doughnut shape, with the Earth at its centre. This spiralling motion of the trapped particles has an associated frequency, thus electromagnetic radiation is found to be emitted by these structures. The belts furthest from the planet have an associated frequency in the VLF band (3 kHz to 30 kHz), while those closest are in the LF band (30 kHz to 300 kHz).

In the Antarctic, from 1974 through to 1989, Dr Robert Helliwell and John Katsufakis conducted several experiments at the Siple Station research facility on behalf of the Stanford University Radio Science Laboratory. Using a 20 km antenna, the team managed to transmit VLF (1.7 to 7 kHz) radiation into a magnetic duct that carried the energy into the Earth's magnetosphere. They found that the signal, when energised, could be received all over the world, somewhat amplified—sometimes by as much as a thousand-fold. They also discovered that the radiation interacted with the ions in this plasma structure, causing a shower of electrons to fall towards the Earth. This would not only alter global communications by supercharging the ionosphere, but would also generate a burst of X-rays. It was later discovered that this release of electrons could also alter weather patterns. These transmissions were carried out intermittently as part of a research program, each transmission lasting only a second or so. It appears that the high-power transmitter actually resonated the Van Allen belts to destruction, throwing fragments into the Earth's atmosphere. Soon afterwards, the belts would rebuild themselves and stay intact until disturbed again, either naturally or artificially.

Interestingly, the US Department of Defense has been funding a bigger and better utility that can do the same and more: the High-frequency Active Auroral Research Program, or HAARP.

So it can be seen that these energy belts hold a massive amount of energy—energy that could somehow be tapped using basic radio engineering. Could this have been the source of energy captured by Moray? The aerial system he used would certainly have been ideal for receiving this electromagnetic energy; so, too, the

initial circuitry. Also, it is interesting how the oscillator valves, which were employed to control the flow of energy, operated on very similar principles to those used in describing the upper atmosphere.

It is also worth noting that any modern LF/MW AM radio receiver will to some degree receive this magnetospheric radiation, commonly referred to as *spherics*. However, radio receivers that use crystals instead of modern semiconductors are completely immune to this natural interference. Could it be that these crystals somehow absorb this magnetospheric radiation? If so, where does it go?

There is still much mystery surrounding the mechanisms of the plasma atmosphere around our planet as well as its solar cousin. There may be many intense, short-burst emissions that remain undetected, which if harnessed could solve the coming energy crisis.

Whether or not Moray actually harnessed this energy remains unknown. If he did not, then he may have found an even more fundamental energy source that remains undetected by modern physics—perhaps LeBon's cosmic source for radioactivity. Either way, the technology was simple and was discovered by intuition rather than through logical deduction, for this is how Dr Moray operated. He stated that with enough financial backing he could have developed a radiant energy receiver that would deliver over 50 kW of power—more than enough for a domestic supply.

In 1961, Moray nearly received a contract from NASA to develop his invention for space travel. A spaceship powered by a single crystal may sound like something from science fiction, but it was nearly a reality some 40 years ago at least. How far behind are we because of greed and ignorance? Where would we be today if we had listened to such individuals as Moray and Tesla? How much of this technology is being developed behind our backs, in secret?

About the Author:

Gavin Dingley has spent several years researching forgotten scientific discoveries and inventions, principally those in the field of electromagnetism and related subtle energies. His main goal is to reproduce many of these discoveries and devices, specifically those relating to Earth energies. Gavin's article, "ParaSETI: ET Contact via Subtle Energies", appeared in NEXUS 8/01.

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